

Alaska's Mineral-Rich Lands – Geological Information Essential to Resource Management

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Alaska has the highest mineral potential in North America, if not the world, but remains vastly under explored. Geologic resources compose a major part of Alaska's economic assets, with about \$4.4 billion in FY06 of oil production revenues funding most of Alaska's State government. Alaska's mineral resources are also an important, although much smaller, revenue source for state and local governments, and a very important source of high-paying jobs in rural Alaska.

Alaska has a long history of mining, with the first recorded production back in the 1880s, current large-scale mining at the Red Dog, Greens Creek, Pogo and Fort Knox mines, and strong potential for future mining at the Pebble and Donlin Creek deposits. However, most of Alaska's mineral resources are poorly developed, with experienced mineral exploration managers characterizing Alaska's present state of mineral development as analogous to that of the western United States in the late 1800s. Mineral exploration in Alaska is impeded by the lack of infrastructure and basic geological data. The present lack of detailed geologic knowledge is a formidable impediment to long-range planning and investment by industry and government.

The State of Alaska, through the Department of Natural Resources, Division of Geological & Geophysical Surveys (DGGS), is involved in two major programs to expand and make accessible geological, geophysical, geochemical, and other aspects of Alaska's mineral resources. DGGS has an integrated program, the Alaska Airborne Geophysical/Geological Mineral Inventory (AAGGMI) Program, of airborne geophysics, geological and geochemical methods to produce highly detailed 1:50,000 and 1:63,360 scale geophysical surveys and geologic maps, with almost 6.2 million acres of Alaska flown for detailed geophysical surveys and about 2.75 million acres of geologic maps produced in the program. DGGS is also part of a multi-agency group completing various facets of the Minerals Data and Information Rescue in Alaska (MDIRA) program to recover and make easily available Alaska mineral information through a coordinated Web-based system. MDIRA projects include databases on Alaskan mineral deposits, geologic literature, and geochemistry data; preservation of core and other physical samples at the Alaska Geologic Materials Center; a digital mining claim information system; and archiving, managing, and disseminating mineral information. Many of these files at participating organizations are now linked to the <http://akgeology.info/> Web site.

The AAGGMI and MDIRA programs provide a wealth of basic geologic and mineral-resource information aiding geologic investigations and mineral exploration. In some instances Alaska is now at the forefront of the rest of the United States and other jurisdictions in providing accessible geologic information. This accessible information aids research at all levels of the geological community. The State can manage mineral resources more efficiently. Individuals and companies able to assimilate this "new" data and build research and exploration efforts around it should make new discoveries around the state of Alaska. Ultimately, new discoveries using this geologic data will lead to new State mineral resource revenue through mineral development and production.